What and Who We Are - As Experimenting Photographers?

Are We Scientists?

The answer is rather simple - We are scientists. Experimenting scientists, as well as being artists. Let us look at the two true sciences that encompass the realm of photography.

First - there is physics - coupled with mathematics. We deal with this aspect of science when buying a lens, using a lens, and making a lens. Also we use mathematics when focusing that lens, and or, using a Large Format camera. So a basic understanding of physics and mathematics is valuable. (*Even that sometimes we do not think of using mathematics, it is still involved.*) And this goes for "digital" photographers as well. (*We need not have a formal training in physics or mathematics to be proficient in what we are doing with our experimenting.*)

Secondly - Mainly to what is called "*analog photography*" - is Chemistry. (*Often thought "dangerous" and difficult to understand.*) At this point I would point to a kitchen and say "THAT, there - Is a Chemical Laboratory. When you are about to make a cake, biscuits, bread, or ANYTHING that you have not cooked before, or even that you have - What do You do?

You open a cookbook - read about what to do and then to do it. After the list of ingredients, there are the instructions; simple and plainly written. If you follow these simple "rules" you have a successful outcome. (*And later on - in making the same thing again, you might wish to try adding or changing some ingredient to make it a little "better" or at least different. = That is up to you.*)

So it is with the other major part of our type of photography is like being in your kitchen and making ready to "bake something". (*PLEASE = I do NOT advise the use of ANY kitchen for the mixing and or, working with ANY Chemicals // No!!! Don't Do THAT!*) I use the backyard porch to mix my chemicals. There are very clearly written formulas (recipes) to follow. – As I have stated before in other writings = Be SAFE. Follow ALL safety rules on any and all of the chemicals that you have. = Do Not Take "shortcuts".

NOTEBOOKS = I can not stress that point more. Keep a "Journal" of ALL your experiments. Especially the outcome of failures as well as your successes. Even before Leonardo Di Vinci - there have been notebooks in a pocket, or on a worktable of every scientist. Do Not rely on your "inflatable memory". It WILL Fail you.

So---

Are we “scientists”? Not by what academy would define. As we - well, most of us - do not rely on our science to make a living from. *(Like always - MONEY seems to be involved.*) Well! I’ll Tell Ya – I feel that I am a scientist (*as well as an artist*). After I mix my chemicals it is often that I have the Oder of a chemist, so that there is a little proof. And there is the FACT that I have a NOTEBOOK where I keep track of my progress and my failures. I write reports and essays. I do a good with a scientific workflow. I know what chemicals I need, as I follow all common sense rules outlined from reading everything I can about what I am about to do. I READ everything I can. I have done this for so long that it has become a habit that I can not control - And I do not wish to have control of it, as I may become some lazy ass. And who just sits scarring out of a window in some “phych-ward” in a sanatarium, on some lonely hill, murmuring stuff about halides and bromides, with the reaction of silver nitrate... And On and On.

If you are doing the same thing, you just might be an *experimenting scientist* as well. I might add that if you are just dumping this and that into a container, hoping for “something” to occur - I suggest that you STOP. I want you to THINK, and realize what you are doing. Do NOT go “Willy-Nilly” into this chemical photography “thing”. There are a lot of things that can go wrong. NO! You will not blow yourself up, but you could get very sick in the combining of these different chemicals and mistakenly ingesting or breathing in some of these substances.

YES - We who are keeping careful notes, following proven procedures, and progressing with failures and some successes are Scientists.

I found a few writings on the subject of “*Can any person become a Scientist*?” Here is what I found....

Please know that I have not included the names, (but two at the last page) on these listing quotes. ----->

“”A scientist” isn’t “a physicist” or “a chemist”, it’s “a person who uses the scientific method”, so yes, you can be a scientist without a degree (and, until the 20th century, most scientists didn’t have degrees).
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Haha, crazy question… actually yes you can.. because to be a scientist all you need is knowledge.. innovative thinking.. but nowadays it's not possible.. if you want to work at Goggle, Microsoft etc.. you need to have.. degrees..
If your innovating something on your own.. you don’t need a degree..!
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“”One can be a science enthusiast and know about science/talk about science to others without a degree. One of my favorite examples of this is the Hydraulic Press Channel on Youtube, who does all kinds of weird experiments (although not really “controlled” experiments haha) with such a press and some free time. On the other hand, you cannot be a working scientist literally without a degree, since science is often dangerous and requires a lot of background knowledge!
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On the other hand, you can learn a lot of science just by watching free lectures online, listening to podcasts or audio books, or just reading the literature as it stands now! You can also apprentice somewhere potentially, although that is not very common at all.

And of course, you can do science at home without a degree necessarily. For example one can chart the progress of the stars with a telescope, can do simple physics tests with the basic machines of the world, can check the progress of tree growth or bug life in your surrounding woodlands, I mean you can test things without needing a degree necessarily.

But again, to be a real working “scientist” in the field you definitely do need a degree in the sense of being trained to use machines, to safely use chemicals, etc.
Start conducting experiments with basic knowledge.

Dedicate and commit yourself to that particular topic you must have Keen observation skills experimentation innovative spirit and creativity and process skills.

Many scientists of previous era did not have degrees - Newton, Edison.

Scientific Truths emerge suddenly.

Yes you can. If you're professor is scientific, spend time with his observations. You can become scientist by staying at home. If you really understand your course work. Otherwise a college is necessary for you.

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Depending on what you mean by scientist, the answer can be “very easily” or “it’s impossible”.

First, the good news: anyone can play around with ideas and learn to test them, and this is the essence of science. You’ll never be a professional, but you can learn a great deal, have fun, and contribute to the world. I think the most important aspect is Citizen Science.

These are projects designed and supervised by professional scientists who need lots of help gathering, organizing, and making sense of data. This can be as simple as running a program on your computer (distributed.net: Project OGR) to playing games (Solve Puzzles for Science) to collecting data about wildlife or even geography (OpenStreetMap). The first project is about finding Optimal Golumb Rulers, which are mathematical relationships between sets of number that help mathematicians evaluate information and solve interesting problems. The second has been used to understand how proteins fold and therefore how they function. The number of data collection efforts for the biological sciences is immense, and OpenStreetMaps is a great tool for scientists and hobbyists and anyone interested in open data.

Second, the bad news:

It's essentially impossible to become a professional scientist without multiple degrees. By professional, I mean someone who is paid to conduct scientific research. To learn the foundations of a scientific discipline, you need to complete a bachelor's degree. Based on this, you can potentially get a job working in a lab, but you would mostly be performing tasks for another person. At the next level, with a master's degree, you can potentially start contributing to the ideas, but most professional scientists have PhDs.

Third, how do you get a degree if you don't have money? There are institutions around the world that can potentially sponsor students from anywhere to earn degrees. These schools are incredibly competitive; it's hard to get in. However, if the right school wants you, they can help with everything. If you are really financially challenged, I think the absolute best school is Berea College. They only admit the most financially limited people, and they not only pay all costs, they also employ all students in part-time work with jobs that pay (not much, but it's still a good deal). This is hardly the only school, but realize that there will always be more bright students than opportunities. Stay focused and keep searching. Once you have a bachelor's degree, you can potentially find funding for a PhD. Most PhD students in the US and Europe are paid; they work a part-time teaching or research assistant position, and earn free tuition, relatively inexpensive health insurance, and a stipend to cover living costs.

I explain a bit more about why you need a degree in my answer to Why do undergraduate students need an advisor/professor in order to do research, and is it possible to do that without having an advisor?

Good luck!
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Why should one become a scientist?

The people who become scientists, especially the good ones, become scientists because they want to. On a personal level, that is the only reason why a person does become a scientist.

However, on a deeper level, why would someone ever become a scientist? The pay is crap. There is a constant state of crisis in the mind. There is always the fear that someone might come along with an idea that might well prove all the work you put in, for the past whatever time, is essentially pointless.

But every person, as a child, has a phase when he asks questions. Loads of them. And they eventually end with the unanswerable ones. Where did we come from. Why do we exist. Where are we going and what is to happen of us. How do we function and why do we die.

These are some of the questions people answer as children and forget as they grow up.

The ones that are stubborn enough to not to grow out of this phase, and to keep asking questions and try to answer them, are the ones that end up doing true research. And the joy of discovery, the pure ecstacy of finding the answer to a question that nobody knew the answer?

That is what being a scientist is all about.
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It depends on what you mean by "scientist". If you use it loosely to mean any person who is curious about nature, can learn from books, recognize fact from fiction and logically think through steps to perform experiments (physical or thought), then yes. This person can even start his/her own business and make money by being an entrepreneur.

If you mean a "professional scientist" - and by that, I mean someone who works in an academic or industrial setting that gets paid by others for their scientific skills and acumen - that will be much more difficult until you have proven yourself. Typically, this is "proven" through your school records, degrees, publications and peer recommendations. Without that, it would be very difficult but not impossible. Basically, you need to work with a professional scientist and gain their good opinion to the point that they would feel comfortable genuinely recommending you for a complementary or even better position.
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What is the exact age to become a scientist?

Scientist means “a person who is studying or has expert knowledge of one or more of the natural or physical sciences.”

Or “A scientist is someone who conducts scientific research to advance knowledge in an area of interest.”

This can achieved in any age, even in age of us.(14)
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And then there is this:

Dr. John Eric Dedden, Phd.
Former Chemist IV at TCEQ

Originally Answered: How can one be a scientist without a degree?

At some point you must learn the scientific method. This and an attention to detail are both necessary to perform repeatable experiments. Then you need to record every minute detail (place, how, what, and when), in a journal, of your experiments, including the errors.
A degree is not necessary.

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Can you be a scientist without a degree?

Asked by: Prof. Avery Bednar | Last update: May 25, 2022

Becoming a data scientist without a Master's degree or Doctorate degree is both possible and, frankly, not entirely rare. As we mentioned earlier. more than 25% of professional data scientists do not have a Master's or Doctorate.

Can I become scientist without degree?

You can become a scientist without a valid degree but your work and theories might not be well-received by the academic community. How much does a scientist earn?
A scientist can earn between INR 1 LPA and INR 15 LPA, depending on the job profile that he/she has been offered.

What qualifies you as a scientist?

A scientist is someone who systematically gathers and uses research and evidence, to make hypotheses and test them, to gain and share understanding and knowledge. A scientist can be further defined by: how they go about this, for instance by use of statistics (statisticians) or data (data scientists).

Can anyone be a scientist?

It's true: Everyone is a scientist. It's just that most people don't realise it. A scientist is someone who tackles a problem through scientific methods, and we all do!

How hard is it to become a scientist?

It is extraordinarily difficult to become a scientist. In fields like biology, chemistry and physics you can spend 4 years of undergrad, 7 years in graduate school and 6 years in postdoctoral positions and still not be able to land a permanent job.

Can you be a self taught scientist?

Many individuals, called autodidacts, are active scientists despite never receiving a college degree. An autodidact is somebody who is self-taught. Some of the most outstanding scientists in history were also autodidacts. These individuals either had minimal grammar school or never received a college degree.

Can I become a self taught scientist?

You Don't Need a Degree to Be a Data Scientist

And if you can find a mentor or community who can help guide and support your learning then that's even better! But don't be afraid to start learning on your own either because there's plenty of resources out there.

How can I become a data scientist at home?

Learn Python. The First and Foremost Step Towards Data Science should learning be a programming language (i.e. Python). ...

Learn Statistics. ...
Data Collection. ...
Data Cleaning. ...
Acquaintance With EDA(Exploratory Data Analysis) ...
Machine Learning & Deep Learning. ...
Learn Deploying of ML model. ...
Real-World Testing.

How can I be a self-taught data scientist?
How should you get started then?

Start with statistics. Of the three building blocks, I think statistics is the most important. ...

Learn Python and SQL. If you're more of an R kind of guy, go for it. ...
Learn linear algebra fundamentals. ...
Learn data manipulation.
What should I study to become a data scientist?

To work as a data scientist, you must have an undergraduate or a postgraduate degree in a relevant discipline, such as Business information systems, Computer science, Economics, Information Management, Mathematics and Statistics.

How many years does it take to be a scientist?

It's common for scientists to go through 4 years of undergrad, around 5 years of higher education, and 3 years of research, which means it'll be a solid 12 years of training.

After you complete your undergraduate education, you'll likely be given a stipend or paycheck as you work through the remainder of your training.

What are 5 things scientist do?

What do scientists do?

1-Making an observation.
2-Asking questions related to the observation.
3-Gathering information related to the observation.
4-Creating a hypothesis that describes assumptions of the observation and makes a prediction.
5-Testing the hypothesis through a systematic approach that can be recreated.

How many types of scientists are there?

There are more than 50 different kinds of scientists!

However, all of these scientists work within three main branches of science. The three main branches of science are: Earth science - the study of the Earth and space.

What famous scientist did not go to college?

Galileo Galilei, astronomer, engineer, mathematician and physicist. Dropped out of college.

Michael Faraday, the chemist and physicist. Although Faraday received little formal education and knew little of higher mathematics, such as calculus, he was one of the most influential scientists in history.

Are autodidacts smarter?

An autodidact is smarter than regular people in certain topics that interest them the most.

Most autodidacts choose to self-teach themselves different topics, diving in deep to learn as much as possible. They will research, read, listen, take notes, and do hands-on work to learn their topic.

Are autodidacts rare?

Autodidacts are not rare, especially in today's world.

Anyone who seeks knowledge on their own is considered to be an autodidact. It has been seen that with the advent of modern educational tools, knowledge banks, and resources, the number of autodidacts has also risen.

What type of scientist was Albert Einstein?

Albert Einstein was a famous physicist. His research spanned from quantum mechanics to theories about gravity and motion.

What is a scientist 1st grade?

Scientists are people who discover new things and research how things work. There are many different types of scientists. They observe, measure, and communicate results to people like you and me.

What do scientists do all day?

Scientists ask big, small, and tricky questions about our world. They test out their ideas with experiments, which often go wrong before they go right. Then they study the results to discover how things work.

Do you need a PhD to be a scientist?

No, a PhD is not an absolute requirement to be a scientist. For instance: Conventional wisdom is that everyone interested in research should have a Ph.

What is a salary of scientist?

Research Scientist salary in India ranges between 3.0 Lakhs to 16.0 Lakhs with an average annual salary of 7.1 Lakhs. Salary estimates are based on 3.9k salaries received from Research Scientists.

Which subject is best for scientist?

Science with maths is the most recommended. After 12th you can opt for B.Sc biotechnology which is a very good field , after graduation you can do PG (M.Sc) in biotechnology.

Those who passed PG level can do researches and can gain PH. D or doctorate .

How do I become a data scientist with no experience?

No Experience?

Here is How To Get Your First Data Science Job

Technical skills. ...

Building a portfolio. ...

Writing about your work. ...

Creating an impressive resume. ...

Networking and having a mentor. ...

Go for growing companies. ...

DO NOT hesitate to take up data roles. ...

Closing Statement.

Do data scientists code?

Data scientists' most essential and universal skill (and the one that sets them the most apart from data analysts) is the ability to write code. As the data scientist interprets data, they can use code to build models or algorithms that will help them gain even more insight into the data.

OK – Back to our subject about “Are Experimental Photographers Scientists.”

Hello, Again = Remember ME....

I am what can be best termed as an Autodidact. And I am very proud of that fact. I feel that I am a Photographic Research Scientist without “credit”. I am Self-Instructed. Since age Nine, when I acquired my first public library card, thus, I set foot on the path of my “Formal Education”. Being self directed - along with about nine mentors in my life, to whom I thank deeply for their time to help me, I have progressed.

I have absolutely no desire to be someone’s “Lab-Rat”. I work on my experiments best alone, at my home lab, or in my camper/trailer darkroom area, or my tent. However - I do like to collaborate with other “scientists” and photographers on any project. Getting “credit” for my contributions to Science is not what I am after. To make better photographic images IS my goal. As well as to be of help to others of the like mind set.

Thank you for taking the time to have read this.

James R. Kyle, Photographer - Saint Louis, Missouri, U.S. of A.